Author Index of Volume 168

Asta, M., 39

Bakker, H., 183
Blažina, Ž., 289
Blomberg, M. K., 313
Bodak, O. I., 257
Bordet, P., 31
Buschow, K. H. J., 269, 321

Carpentier, J. L., 295
Ceder, G., 39
Chandra, D., 159
Cheong, S.-W., 31
Clarke, A. P., 1
Cooper, A. S., 31

Dabrowski, B., 19
Dao, C. N., 237
de Boer, J. L., 347
de Fontaine, D., 39
Dellis, J. L., 295
Desch, P. B., 69
Di, L. M., 183
Ding, J., 335
Ding, W., 159
Dirken, M. W., 269
Ditchek, B., 115
Drašner, A., 289

Ehmann, A., L1
Ettmayer, P., L7

Finel, A., 103
Fisk, Z., 31
Förster, H., 249
Franzen, H. F., 377
Fries, T., L1
Fruchart, D., 321
Fujitani, S., 201
Fultz, B., 145
Furukawa, A., 201
Furukawa, N., 201

Ge, S.-L., 195
Głowiak, T., 237
Gonis, A., 127
Gschneidner, Jr., K. A., 257
Gudat, A., 305
Gumiński, C., 329
Gurin, V. N., 313

Haag, S., 305
Haange, R. J., 347
Hinks, D. G., 19
Hundley, M. F., 31
Huskowska, E., 237

Isnard, O., 321

Jacobs, T. H., 269
Jorgensen, J. D., 19

Kad, B., 81
Kaufman, L., 115
Kemmler-Sack, S., L1
Kniep, R., 305
Knothe, M., 249
Korsukova, M. M., 313
Kraitchman, M., 39
Kwei, G. H., 31

L'Heritier, Ph., 321
Lazaro, F., 321
Lebrun, A., 295
Legendziewicz, J., 237
Lengauer, W., L7
Lera, F., 321
Loeff, P. I., 183
Lynch, R. A., 159

Mällo, A., 361
Marezio, M., 31
Meetsma, A., 347
Merisalo, M. J., 313
Milius, W., 305
Miraglia, S., 321
Mitchell, A. W., 19
Mitchell, T. E., 53
Murayama, S., 221

Nagabhooshanam, M., 211
Nasako, K., 201
Nash, P., 69
Nastasi, M., 91
Nicholson, D. M., 127

Obbade, S., 321
Ogino, Y., 221
Oliver, B. F., 81

Panagopoulos, Chr. N, 175
Patil, R. S., 169
Patil, S. A., 169
Pecharsky, V. K., 257
Pei, S.-Y., 19
Picot, J. C., 295
Protsyk, A. S., 257

Rabenau, A., 305
Richards, D. R., 19
Rillo, C., 321
Rosenberg, M., 335
Roy, T., 53

Saito, T., 201
Sakka, Y., 277
Salomons, E., 39
Sato, H., 53
Sawant, S. R., 169
Schriber, J. E., 31
Schwarz, K., 249
Schwarz, R. B., 1, 31, 69
Sluiter, M., 127
Stocks, G. M., 127
Suryavanshi, S. S., 169

Tellier, P., 295
Thiel, R. C., 269
Thompson, J. D., 1, 31
Tomilinson, J. J., 159
Turchi, P. E. A., 103, 127

Wiegers, G. A., 347

Yamasaki, T., 221
Yang, Y.-C., 195
Yonesaki, T., 201
Yonezu, I., 201
Yvon, K., L7

Zhang, X.-D., 195
Zhang, Y., 377
Zheng, Y., 19

Subject Index of Volume 168

Absorption
  absorption, luminescence and crystal structure studies of dysprosium compound with L-α-alanine: $[Dy(L\text{-}\alpha\text{-}AlaH)(H_2O)_6]Cl_3$, 237
  characteristics of hydrogen-absorbing Zr–Mn alloys for heat utilization, 201
Alanine
  absorption, luminescence and crystal structure studies of dysprosium compound with L-α-alanine: $[Dy(L\text{-}\alpha\text{-}AlaH)(H_2O)_6]Cl_3$, 237
Aluminium
  study of α/γ peritectic oscillations using containerless liquid directional solidification of γ-TiAl compositions, 81
  formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
  phase stability of ion irradiated Ni_2Al_3, 91
Amorphization
  influence of milling atmosphere on amorphization of chromium and Cr–Cu powders by ball milling, 221
Antimony
  magnetoresistance in plastically deformed InSb crystals at 77 K, 221

Barium
  chemical and crystallographic phase behavior in the $Ba_{1-x}K_xBiO_3$ system, 19
  intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-x}$: implications for critical current densities, 1
  on the crystal structure of $Ba_6Ni_6N_7$, a low valency nitridoniccolate with infinite helical [Ni–N] zigzag chains, 305
  one- and two-dimensional oxygen ordering in $YBa_2Cu_3O_x$, 39
Bismuth
  chemical and crystallographic phase behavior in the $Ba_{1-x}K_xBiO_3$ system, 19
  stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+x}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
Boron
  coercivity at cryogenic temperatures in $Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
  single-crystal X-ray diffraction study on $Ce_{1-x}La_xB_6$ solid solutions, 313

Calcium
  stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+x}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
Carbon
  hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
  Mössbauer evidence for uniaxial magnetic anisotropy in melt-spun $Sm_2Fe_{17}C_x$ for $x \geqslant 0.5$, 335
Cerium
  single-crystal X-ray diffraction study on $Ce_{1-x}La_xB_6$ solid solutions, 313
  crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Chromium
  formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
  influence of milling atmosphere on amorphization of chromium and Cr–Cu powders by ball milling, 221
  thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289
Cobalt
  coercivity at cryogenic temperatures in $Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
  sintering characteristics of cobalt ultrafine powders, 277
  thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289
Coercivity
  coercivity at cryogenic temperatures in

$Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
Conductivity
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169
Copper
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
influence of milling atmosphere on amorphization of chromium and Cr–Cu powders by ball milling, 221
intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-x}$: implications for critical current densities, 1
one- and two-dimensional oxygen ordering in $YBa_2Cu_3O_z$, 39
Cuprates
properties of T* phase cuprate materials, 31
structural instabilities in superconducting cuprates, 53
Current density
intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-x}$: implications for critical current densities, 1

Dielectric behavior
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169
Directional solidification
study of α/γ peritectic oscillations using containerless liquid directional solidification of γ-TiAl compositions, 81
Disorder
atomic disorder in Nb_3Sn during heavy mechanical impact, 183
non-intuitive features of disorder → order transformations, 145
Dysprosium
absorption, luminescence and crystal structure studies of dysprosium compound with L-α-alanine: $[Dy(L\text{-}\alpha\text{-}AlaH)(H_2O)_6]Cl_3$, 237

Electric impendence spectroscopy
determination of the ionic transport number of β-Ta_2O_5 at high temperatures by electric impedance spectroscopy, 295
Electrical transport
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$, "$SmTaS_3$", 347
Electronic structure
electronic structure, alloy phase stability and phase diagrams, 127

Erbium
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321

Finite-element method
FEM calculation of the elastic H–H interaction energy for hydrogen in metals, 361

Gadolinium
^{155}Gd Mössbauer effect study of Gd_2 compounds, 269
Germanium
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257

Heat capacity
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Heat utilization
characteristics of hydrogen-absorbing Zr–Mn alloys for heat utilization, 201
Hydrogen
characteristics of hydrogen-absorbing Zr–Mn alloys for heat utilization, 201
FEM calculation of the elastic H–H interaction energy for hydrogen in metals, 361
thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289
Hydrogenation
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321

Impact
atomic disorder in Nb_3Sn during heavy mechanical impact, 183
Indium
magnetoresistance in plastically deformed InSb crystals at 77 K, 211
Interaction energy
FEM calculation of the elastic H–H interaction energy for hydrogen in metals, 361
Intergranular phases
intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-x}$: implications for critical current densities, 1
Ion irradiation
phase stability of ion irradiated Ni_2Al_3, 91

Ionic transport number
determination of the ionic transport number of β-Ta_2O_5 at high temperatures by electric impedance spectroscopy, 295
Iridium
iridium recovery from compact metal scrap, 249
Iron
coercivity at cryogenic temperatures in $Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
Mössbauer evidence for uniaxial magnetic anisotropy in melt-spun $Sm_2Fe_{17}C_x$ for $x \geqslant 0.5$, 335
stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+z}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289

Lanthanum
single-crystal X-ray diffraction study on $Ce_{1-x}La_xB_6$ solid solutions, 313
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Lead
stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+z}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
Lithium
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
Luminescence
absorption, luminescence and crystal structure studies of dysprosium compound with L-α-alanine: $[Dy(L\text{-}\alpha\text{-}AlaH)(H_2O)_6]Cl_3$, 237

Magnetic anisotropy
Mössbauer evidence for uniaxial magnetic anisotropy in melt-spun $Sm_2Fe_{17}C_x$ for $x \geqslant 0.5$, 335
Magnetic ordering
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
Magnetic properties
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$, "$SmTaS_3$", 347
Magnetic susceptibility
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Magnetoresistance
magnetoresistance in plastically deformed InSb crystals at 77 K, 211
Manganese
characteristics of hydrogen-absorbing Zr–Mn alloys for heat utilization, 201
coercivity at cryogenic temperatures in $Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169
Mercury
electroanalytical determination of the solubility of noble metals in mercury, 329
Metal scrap
iridium recovery from compact metal scrap, 249
Metastable phases
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
Milling
influence of milling atmosphere on amorphization of chromium and Cr–Cu powders by ball milling, 221
Mössbauer effect
^{155}Gd Mössbauer effect study of Gd_2 compounds, 269
Mössbauer spectroscopy
Mössbauer evidence for uniaxial magnetic anisotropy in melt-spun $Sm_2Fe_{17}C_x$ for $x \geqslant 0.5$, 335

Nickel
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
on the crystal structure of $Ba_4Ni_6N_7$, a low valency nitridoniccolate with infinite helical [Ni–N] zigzag chains, 305
phase stability of ion irradiated Ni_2Al_3, 91

thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289
Niobium
atomic disorder in Nb_3Sn during heavy mechanical impact, 183
Nitrides
low-temperature thermal expansion of refractory nitrides, L7
Nitrogen
on the crystal structure of $Ba_8Ni_6N_7$, a low valency nitridoniccolate with infinite helical [Ni–N] zigzag chains, 305
Noble metals
electroanalytical determination of the solubility of noble metals in mercury, 329

Order
non-intuitive features of disorder → order transformations, 145
Ordering
one- and two-dimensional oxygen ordering in $YBa_2Cu_3O_z$, 39
Oxygen
chemical and crystallographic phase behavior in the $Ba_{1-x}K_xBiO_3$ system, 19
intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-z}$: implications for critical current densities, 1
internal stress in growing ZrO_2 films, 175
stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+z}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
one- and two-dimensional oxygen ordering in $YBa_2Cu_3O_z$, 39

Peritectic oscillations
study of α/γ peritectic oscillations using containerless liquid directional solidification of γ-TiAl compositions, 81
Phase behavior
chemical and crystallographic phase behavior in the $Ba_{1-x}K_xBiO_3$ system, 19
Phase diagrams
calculation of ternary and quaternary phase diagrams containing semiconductor/metallic compound pseudo-binary eutectics, 115
electronic structure, alloy phase stability and phase diagrams, 127
Phase stability
electronic structure, alloy phase stability and phase diagrams, 127
phase stability of ion irradiated Ni_2Al_3, 91
phase stability properties in complex substitutional alloys, 103
Phase transitions
stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+z}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1
phase transitions in "plastic crystals", 159
Plastic crystals
phase transitions in "plastic crystals", 159
Potassium
chemical and crystallographic phase behavior in the $Ba_{1-x}K_xBiO_3$ system, 19
Praseodymium
coercivity at cryogenic temperatures in $Pr_2(Co_{1-x}Mn_x)_{14}B$ and $Pr_2(Fe_{1-x}Mn_x)_{14}B$, 195
Pseudo-binary eutectics
calculation of ternary and quaternary phase diagrams containing semiconductor/metallic compound pseudo-binary eutectics, 115

Samarium
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
Mössbauer evidence for uniaxial magnetic anisotropy in melt-spun $Sm_2Fe_{17}C_x$ for $x \geq 0.5$, 335
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$, "$SmTaS_3$", 347
Silver
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Sintering
sintering characteristics of cobalt ultrafine powders, 277
Solid solutions
single-crystal X-ray diffraction study on $Ce_{1-x}La_xB_6$ solid solutions, 313
Solubility
electroanalytical determination of the solubility of noble metals in mercury, 329
Stress
internal stress in growing ZrO_2 films, 175
Strontium
stacking polytypes in the system $((Bi,Pb)O)_2Sr_{2-x}Ca_xBi_{n-1}Fe_nO_{3n+1+z}$: an unusual case of reversible phase transition between $n = 1$ and $n = 2$, L1

Structure
single crystal structure determination of $Tm_{19}S_{22}$—a new thulium sulfide, 377
absorption, luminescence and crystal structure studies of dysprosium compound with L-α-alanine: $[Dy(L\text{-}\alpha\text{-}AlaH)(H_2O)_6]Cl_3$, 237
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
on the crystal structure of $Ba_6Ni_6N_7$, a low valency nitridoniccolate with infinite helical [Ni–N] zigzag chains, 305
structural instabilities in superconducting cuprates, 53
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$, "$SmTaS_3$", 347
crystal structure, heat capacity (1.5–80 K) and magnetic susceptibility (1.6–300 K) of LaAgGe and CeAgGe, 257
Substitutional alloys
phase stability properties in complex substitutional alloys, 103
Sulphur
single crystal structure determination of $Tm_{19}S_{22}$—a new thulium sulfide, 377
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$, "$SmTaS_3$", 347
Superconductors
properties of T* phase cuprate materials, 31
structural instabilities in superconducting cuprates, 53

Tantalum
determination of the ionic transport number of β-Ta_2O_5 at high temperatures by electric impedance spectroscopy, 295
structure, electrical transport and magnetic properties of the misfit layer compound $(SmS)_{1.19}TaS_2$ "$SmTaS_3$", 347
Thermal expansion
low-temperature thermal expansion of refractory nitrides, L7
thermodynamics
thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289
Thulium
single crystal structure determination of $Tm_{19}S_{22}$—a new thulium sulfide, 377
hydrogenation, crystal structure and magnetic ordering of $R_2Fe_{14}C$ (R = Sm, Er, Tm), 321
Tin
atomic disorder in Nb_3Sn during heavy mechanical impact, 183
Titanium
study of α/γ peritectic oscillations using containerless liquid directional solidification of γ-TiAl compositions, 81
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169

X-ray diffraction
single-crystal X-ray diffraction study on $Ce_{1-x}La_xB_6$ solid solutions, 313

Yttrium
intergranular phases in cyclically annealed $YBa_2Cu_3O_{7-\delta}$: implications for critical current densities, 1
one- and two-dimensional oxygen ordering in $YBa_2Cu_3O_6$, 39

Zinc
d.c. conductivity and dielectric behavior of Ti^{4+} substituted Mg–Zn ferrites, 169
Zirconium
characteristics of hydrogen-absorbing Zr–Mn alloys for heat utilization, 201
formation of metastable $L1_2$ phases in Al_3Zr and Al–12.5%X–25%Zr (X = Li, Xr, Fe, Ni, Cu), 69
internal stress in growing ZrO_2 films, 175
thermodynamic properties of the $ZrCr_2T_{0.8}$–H_2 systems (T = Fe, Co, Ni), 289